

REMARKS

No new matter is added by this amendment. The present application was filed on December 11, 2003 with original claims 1-48. By this amendment claims 1 and 16 are amended. The claims remaining in consideration are claims 1-48. Reconsideration is respectfully requested.

Claims 1-10 and 12-18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,372,610 issued to Johansson. Claim 1 is an independent claim. Claims 2-10 and 12-18 are ultimately dependent upon claim 1. Independent claim 1 has been amended to more clearly identify the subject matter Applicants regard as the invention.

The present invention as embodied in amended independent claim 1 sets forth a backspot facing tool having a shaft and a cutting element. The shaft has a first end, a second end and a recess located near the first end. The shaft has an outer circumference and is centered on a first axis. The shaft is rotated in a first direction about the first axis during cutting. The cutting element has an inner portion and an outer portion. The cutting element is pivotally coupled to the shaft about a second axis and is movable between a closed position and an open position. The first and second axis are parallel. The cutting element further has an inner surface. The inner surface has a negative shear angle with a plane which is intersected by the first axis and the second axis when in the open position (as shown specifically in Figure 6B). A portion of the plane intersects the cutting element. The negative shear angle is in a direction opposite the rotational direction from the portion of the plane to the inner surface.

The negative shear angle is with respect to the direction the shaft is moving when it is cutting which is shown by 44 in Figure 6B. With respect to the annotated Figure 3 of Johansson from the current Office Action, the plane AX1 indicated by the Examiner would have to be rotated counterclockwise such that it intersects AX2. It should also be noted that the direction of cutting with respect to annotated Figure 3 of Johansson is in the clockwise direction, i.e., the opposite direction of the drawing of Figure 6B. Thus the shear angle or the angle between AX1 and the plane of the cutting element is a positive shear angle.

The Examiner utilizes a Figure from Johannson in an attempt to show the features of the present invention as claimed in independent claim 1. In doing so, the Examiner states that Johannson teaches that is customary to reverse the direction and in doing so draws an “Arrow B: rotation of spindle” on the Figure (see Page 4 of the present office action). However, the Examiner neglected to take into account that if the device of the Figure is rotated in this direction, the cutting element would not be in the cutting position any longer, but would rotate to the closed position. The cutting element would also have to be flipped, i.e., reversed, thus providing a *positive* shear angle again.

In order to clarify this distinction, independent claim 1 has been amended to make it clear that the negative shear angle is defined when the cutting element is in the open position, *is in a direction opposite the rotational direction during cutting*, and is measured from the portion of the plane which intersects the cutting element to the inner surface.

Since Johannson does not include each and every limitation of amended independent claim 1, Applicants respectfully assert that the §102 rejection is improper and must be withdrawn. Claims 2-10 and 12-18 are ultimately dependent upon allowable claim 1. Therefore, for the reasons set forth above and based on their own merits Applicants, respectfully assert that claims 2-10 and 12-18 are also allowable.

Claims 11 and 19 were rejected under 35 USC §103(a) as being unpatentable over Johannson in view of US Patent 3,827,821 issued August 6, 1974 to Henry F. Swenson (“Swenson”). This rejection is respectfully traversed. Claims 11 and 19 are ultimately dependent upon allowable independent claim 1. Swenson does not overcome the deficiencies of Johannson. Therefore, based on the arguments above, and based on their own merits, applicants respectfully assert that claims 11 and 19 allowable.

Previously amended independent claim 20 sets forth a backspot facing tool having a shaft and a cutting element. The shaft has a first end and a second end and a recess located near the first end. The shaft has an outer circumference and is centered on a first axis. The cutting element has an inner portion and an outer portion. The cutting element is pivotally coupled to the shaft and is movable between a closed position and an open position. The backspot facing tool is adapted to be rotated in a first direction to remove material from a workpiece and to pivot toward the closed position when the backspot

facing tool is rotated in a second direction. The second direction is opposite the first direction. The cutting element exhibits an over-center cam action to initiate movement of the cutting element towards the closed position when the backspot facing tool is rotated in the second direction. The cutting element has an intermediate position between the open position and the closed position. The outer portion has an edge. The over-center action is achieved by a distance from the edge to the first axis when the cutting element is in the open position being shorter than the distance when the cutting element is in the intermediate position.

In other words, when the cutting element is in the intermediate position, the distance from the edge to the first axis, i.e., center of the shaft, *is greater than the distance from the edge to the first axis when the cutting element is in the open position.* This is clearly shown in Figures 6B and 6C.

This limitation is not taught nor suggested by either Johannson or Swenson (see Figure 5 of Swenson which clearly shows the opposite), singularly or in combination. Therefore, Applicants respectfully assert that the §103(a) rejection of independent claim 20 is improper and must be withdrawn. Applicants respectfully assert that amended independent claim 20 is allowable over Johannson.

Claims 21-33 are ultimately dependent upon allowable independent claim 20. Therefore, for the reasons set forth above, and based on their own merits, applicants respectfully assert that claims 21-33 are also allowable.

Previously amended independent claim 34 sets forth a backspot facing tool having a shaft and a cutting element. The shaft has a first end and a second end and a recess located near the first end. The shaft has an outer circumference and is centered on a first axis. The cutting element has an inner portion and an outer portion. The cutting element is pivotally coupled to the shaft and is movable between a closed position and an open position. The cutting element includes an outer edge and is movable to an intermediate position between the open and closed positions. The outer edge inscribes *a first circle when the cutting element is in the open position and a second circle when the cutting element is in the intermediate position. The first circle has a smaller diameter than the second circle.* The first and second circle are concentric and are centered on the first axis. This is more clearly shown in amended Figures 6B and 6C.

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Such a relationship is not shown or taught or suggested by Johansson or Swenson, singularly or in combination. Therefore Applicants respectfully assert that amended claim 34 is allowable over Johansson and request that the §103(a) rejection be withdrawn. Dependent claims 34-48 are ultimately dependent upon allowable claim 34. Therefore for the reasons set forth above and based on their own merits Applicants respectfully assert that dependent claims 34-48 are also allowable.

All of the Examiner's objections and rejections having been made moot or successfully traversed. Applicants respectfully assert that the present application is now in condition for allowance. An early Notice of Allowance is solicited.

Applicant believes that no fees are due, however, if any become required, the Commissioner is hereby authorized to charge any additional fees or credit any overpayments to Deposit Account 08-2789 in the name of Howard & Howard Attorneys.

Respectfully submitted

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Date

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